

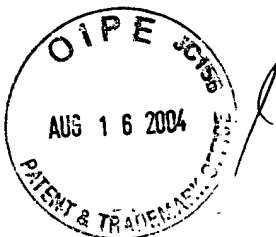


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APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/687,676	10/17/2003	2643	1352	11336-641 (P98007USC)	17	38	6

Susna D. Reinecke  
 BRINKS HOFER GILSON & LIONE  
 P.O. Box 10395  
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CONFIRMATION NO. 9358

## FILING RECEIPT



\*OC000000011804270\*

Date Mailed: 02/02/2004

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections, facsimile number 703-746-9195. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

David H. Griesinger, Cambridge, MA;

## Assignment For Published Patent Application

Harman International Industries, Incorporated;

## Domestic Priority data as claimed by applicant

This application is a CON of 09/146,442 09/03/1998  
 which is a CIP of 08/684,948 07/19/1996 PAT 5,796,844

## Foreign Applications

If Required, Foreign Filing License Granted: 01/30/2004

Projected Publication Date: 05/13/2004

Non-Publication Request: No

Early Publication Request: No

## Title

5-2-5 Matrix encoder and decoder system

## Preliminary Class

381

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**LICENSE FOR FOREIGN FILING UNDER  
Title 35, United States Code, Section 184  
Title 37, Code of Federal Regulations, 5.11 & 5.15**

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450, on the below date:  
Date: August 12, 2004 Name: Susan D. Reinecke Signature: *Susan D. Reinecke*

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of: David H. Griesinger

Appln. No.: 10/687,676

Filed: October 17, 2003

For: 5-2-5 MATRIX ENCODER AND  
DECODER SYSTEM

Attorney Docket No: 11336-641 (P98007USC)

Examiner: TBA

Art Unit: 2643

Confirmation No.: 9358

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

TRANSMITTAL

Sir: Attached is/are:

- ☒ Request for Corrected Filing Receipt (in dup. 2 pages each), a copy of the Filing Receipt (2 pages) and copy of page one of the application as filed (1 page).
- ☒ Return Receipt Postcard

Fee calculation:

- ☐ No additional fee is required.
- ☐ Small Entity.
- ☐ An extension fee in an amount of \$\_\_\_\_\_ for a \_\_\_\_\_-month extension of time under 37 C.F.R. § 1.136(a).
- ☐ A petition or processing fee in an amount of \$\_\_\_\_\_ under 37 C.F.R. § 1.17(\_\_\_\_\_).
- ☐ An additional filing fee has been calculated as shown below:

					Small Entity			Not a Small Entity	
	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra	Rate	Add'l Fee	or	Rate	Add'l Fee
Total		Minus			x \$9=			x \$18=	
Indep.		Minus			x 43=			x \$86=	
First Presentation of Multiple Dep. Claim					+\$145=			+\$290=	
					Total	\$		Total	\$

Fee payment:

- ☐ A check in the amount of \$\_\_\_\_\_ is enclosed.
- ☐ Please charge Deposit Account No. 23-1925 in the amount of \$\_\_\_\_\_. A copy of this Transmittal is enclosed for this purpose.
- ☐ Payment by credit card in the amount of \$\_\_\_\_\_ (Form PTO-2038 is attached).
- ☒ The Director is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this paper (including any extension fee required to ensure that this paper is timely filed), or to credit any overpayment, to Deposit Account No. 23-1925. Respectfully submitted,

Date: August 12, 2004

*Susan D. Reinecke*  
Susan D. Reinecke

(Reg. No. 40,198)

Customer No.: 00757

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on August 12, 2004

Date of Deposit

Susan D. Reinecke, Reg. No. 40,198

Name of applicant, assignee or  
Registered Representative

*Susan D. Reinecke*  
Signature

August 12, 2004  
Date of Signature

Our Case No. 11336-641  
(P98007USC)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: David H. Griesinger Serial No. 10/687,676 Filing Date: October 17, 2003 For 5-2-5 MATRIX ENCODER AND DECODER SYSTEM	Examiner: TBA Group Art Unit No.: 2643 Confirmation No. 9358
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**REQUEST FOR CORRECTION OF FILING RECEIPT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Attention: Application Processing Division  
Customer Correction Branch

Sir:

Applicant requests the issuance of a corrected filing receipt for the above-referenced pending patent application. A copy of the original Filing Receipt is enclosed. In support of this request, Applicant respectfully states: the captioned application claims the benefit of U.S. Provisional Application No. 60/058,169 filed


U.S. Serial No. 10/687,676  
Filed: Oct. 17, 2003

September 5, 1997 as listed in the Priority Claim in the first paragraph of the patent application (copy enclosed). The present application is a continuation of U.S. Patent Application No. 09/146,442 which claims the benefit of 60/058,169. Therefore, the present application is entitled to claim benefit of U.S. Provisional Patent Application No. 60/058,169.

Applicant respectfully requests that a Corrected Filing Receipt be issued that includes the priority claim to U.S. provisional application Serial No. 60/058,169.

The Commissioner is hereby authorized to charge any fees required to Deposit Account No. 23-1925. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

  
Susan D. Reinecke  
Registration No. 40,198  
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## **5-2-5 MATRIX ENCODER AND DECODER SYSTEM**

### **INVENTOR:**

**David H. Griesinger**

### **PRIORITY CLAIM**

[001] This application claims the benefit of U.S. Provisional Patent Application No. 60/058,169, entitled "5-2-5 Matrix Encoder and Decoder System" filed September 5, 1997; and is a continuation of U.S. Patent Application No. 09/146,442, entitled "5-2-5 Matrix Encoder and Decoder System" filed September 3, 1998 (hereby incorporated by reference), which is a continuation-in-part of U.S. Patent Application No. 08/684,948, entitled "Multichannel Active Matrix Sound Reproduction with Maximum Lateral Separation" filed July 19, 1996 (now issued U.S. Patent No. 5,796,844).

### **BACKGROUND OF THE INVENTION**

[002] This invention relates to sound reproduction systems involving the decoding of a stereophonic pair of input audio signals into a multiplicity of output signals for reproduction after suitable amplification through a like plurality of loudspeakers arranged to surround a listener, as well as the encoding of multichannel material into two channels.

### **SUMMARY**

[003] The present invention concerns an improved set of design criteria and their solution to create a decoding matrix having optimum psychoacoustic performance in reproducing encoded multichannel material as well as standard two channel material. This decoding matrix maintains high separation between the left and right components of stereo signals under all conditions, even when there is a net forward or rearward bias to the input signals, or when there is a strong sound component in a particular direction, while maintaining high separation between the various outputs for signals with a defined direction,